FIG. 1

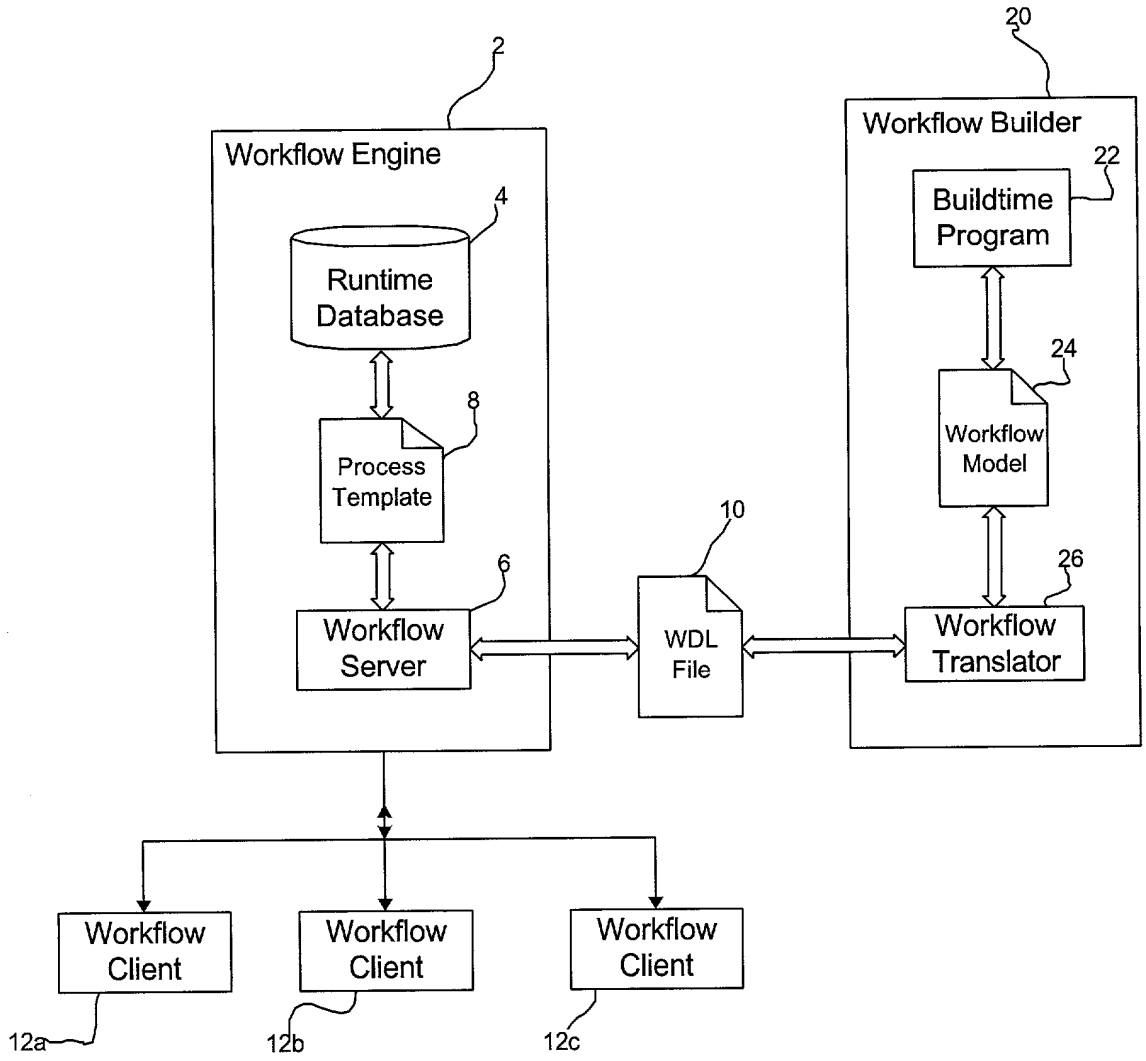
20
2
Workflow Builder
Workflow Engine
22
Buildtime Program
4
Runtime Database
24
Workflow Model
8
Process Template
10
26
6
Workflow Server
WDL File
Workflow Translator
Workflow Client
Workflow Client
Workflow Client
12a
12b
12c

FIG. 2

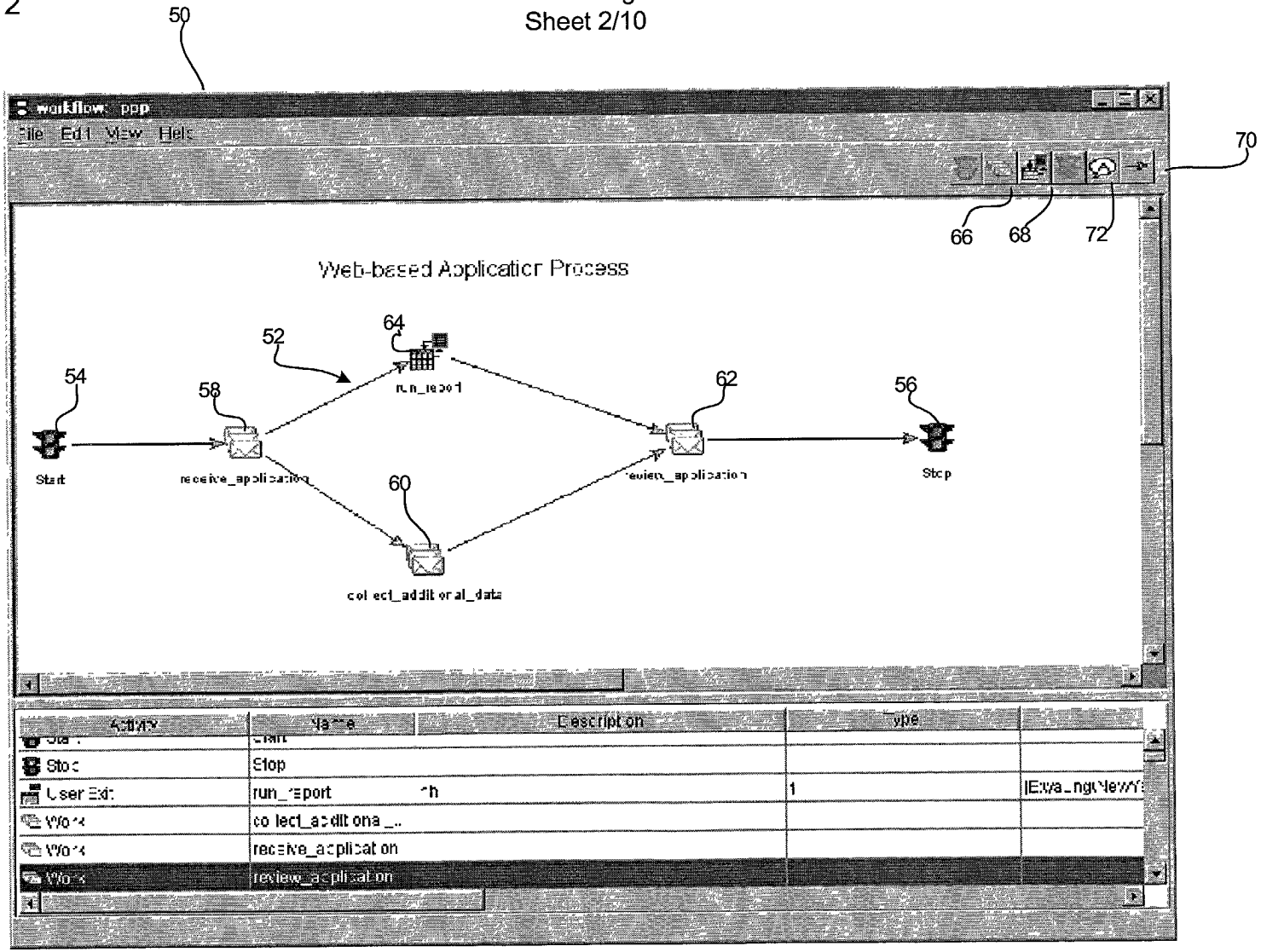
50
70
66
68
72
Web-based Application Process
64
52
54
58
62
56
60
Start
Stop
Activity
Name
Description
Type
Stop
User Exit
Work
Work
Work
run_report
collect_additional_...
receive_application
review_application

FIG. 3

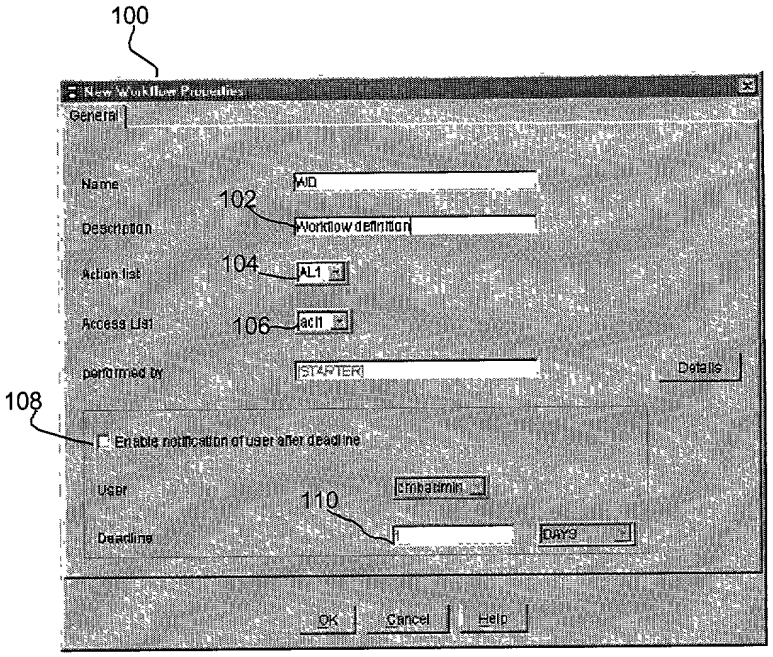
100
New Workflow Properties
General
Name
WD
102
Description
Workflow definition
Action list
104
AL1
Access List
106
acl1
performed by
STARTER
Details
108
Enable notification of user after deadline
User
Emkadmin
110
Deadline
1
DAYS
OK
Cancel
Help

FIG. 4

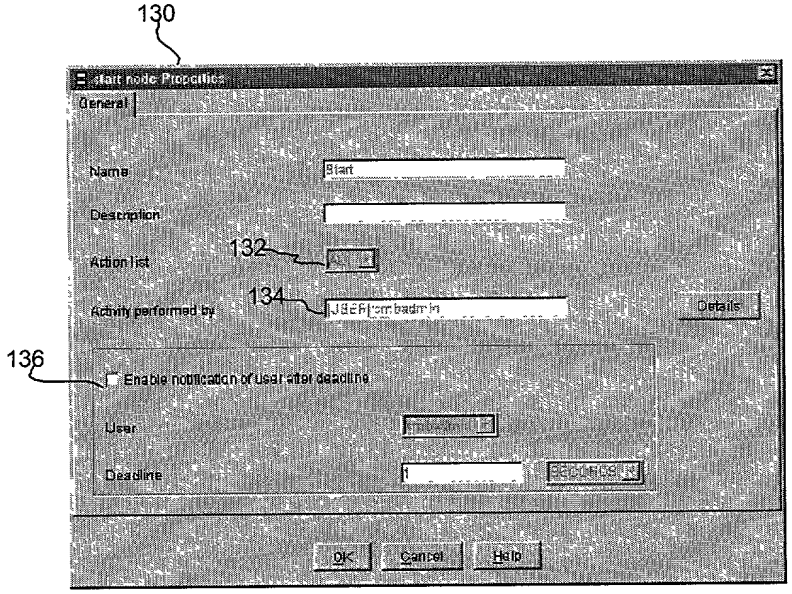
130
Start node Properties
General
Name
Start
Description
Action list
132
Activity performed by
134
Details
136
Enable notification of user after deadline
User
Deadline
1
OK
Cancel
Help

FIG. 5

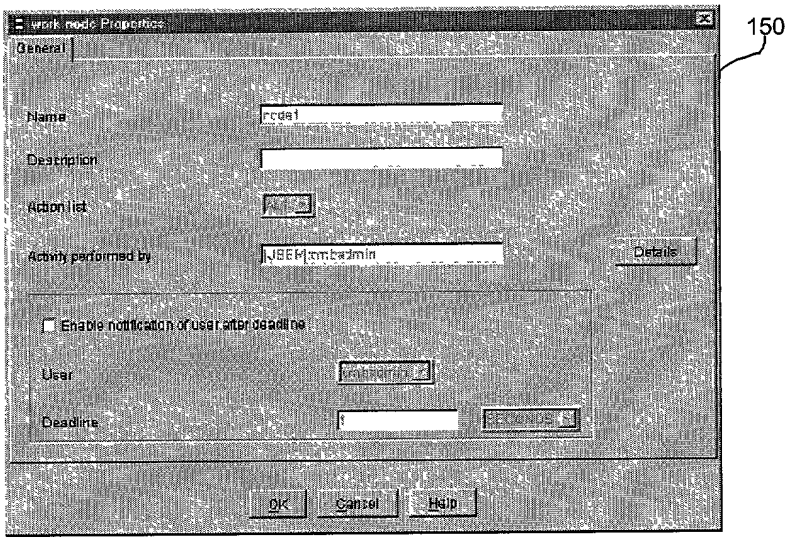

FIG. 6

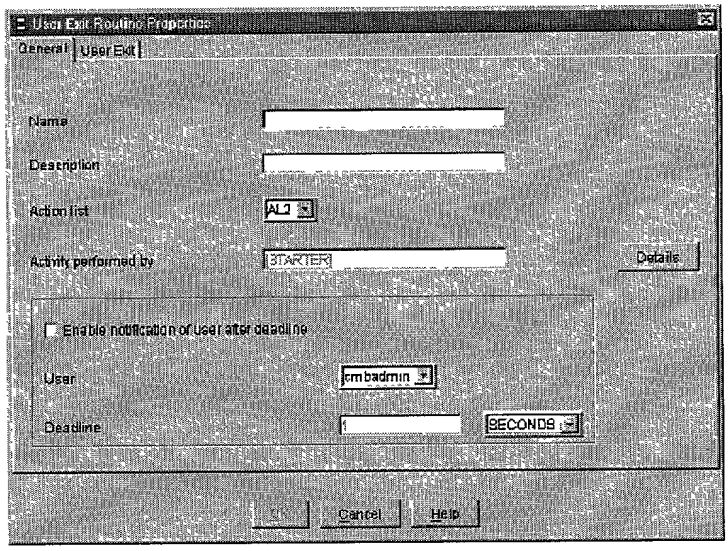

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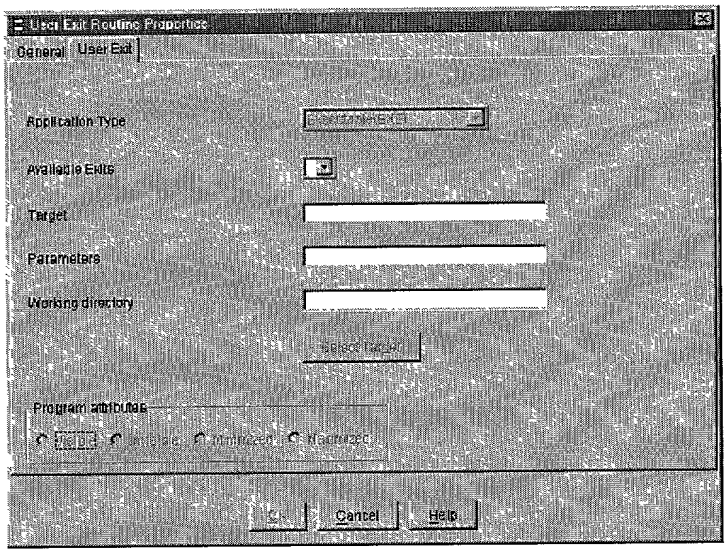
FIG. 7



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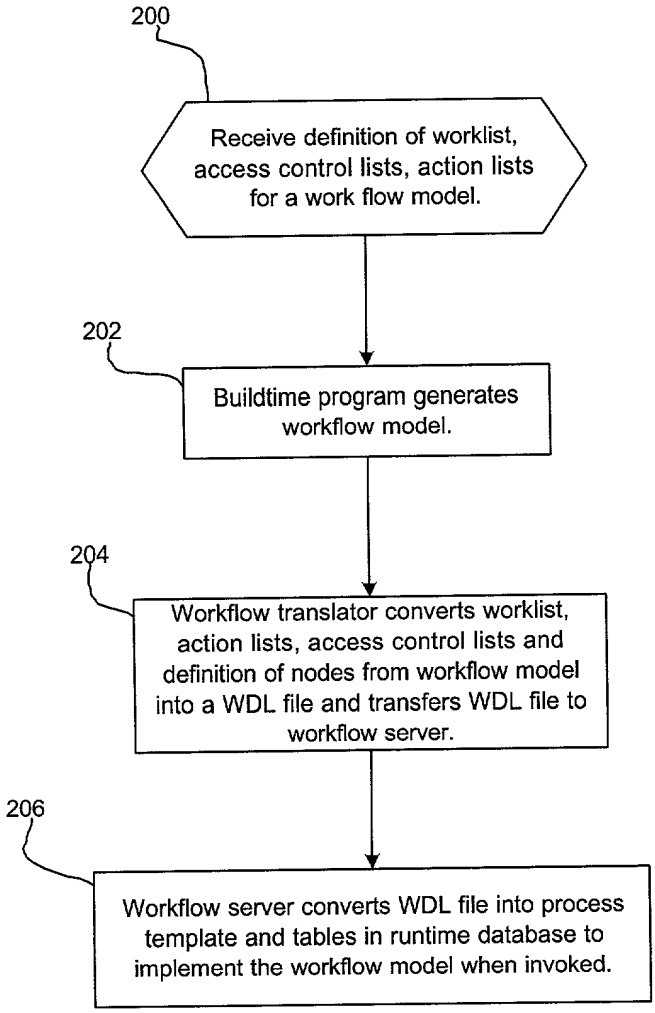

FIG. 8

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FIG. 9

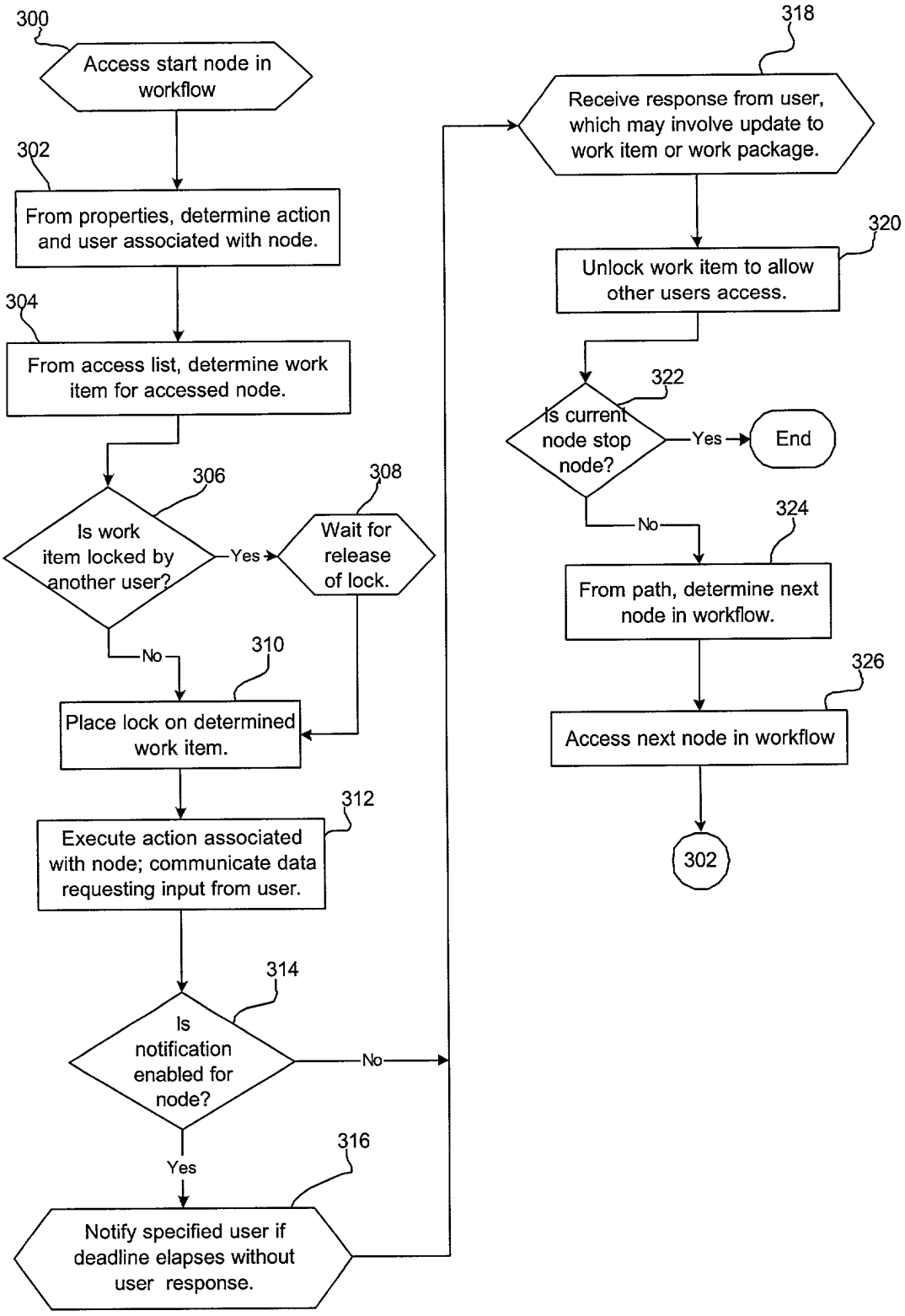
300
Access start node in workflow
302
From properties, determine action and user associated with node.
304
From access list, determine work item for accessed node.
306
Is work item locked by another user?
Yes
308
Wait for release of lock.
No
310
Place lock on determined work item.
312
Execute action associated with node; communicate data requesting input from user.
314
Is notification enabled for node?
No
Yes
316
Notify specified user if deadline elapses without user response.
318
Receive response from user, which may involve update to work item or work package.
320
Unlock work item to allow other users access.
322
Is current node stop node?
Yes
End
No
324
From path, determine next node in workflow.
326
Access next node in workflow
302

FIG. 10

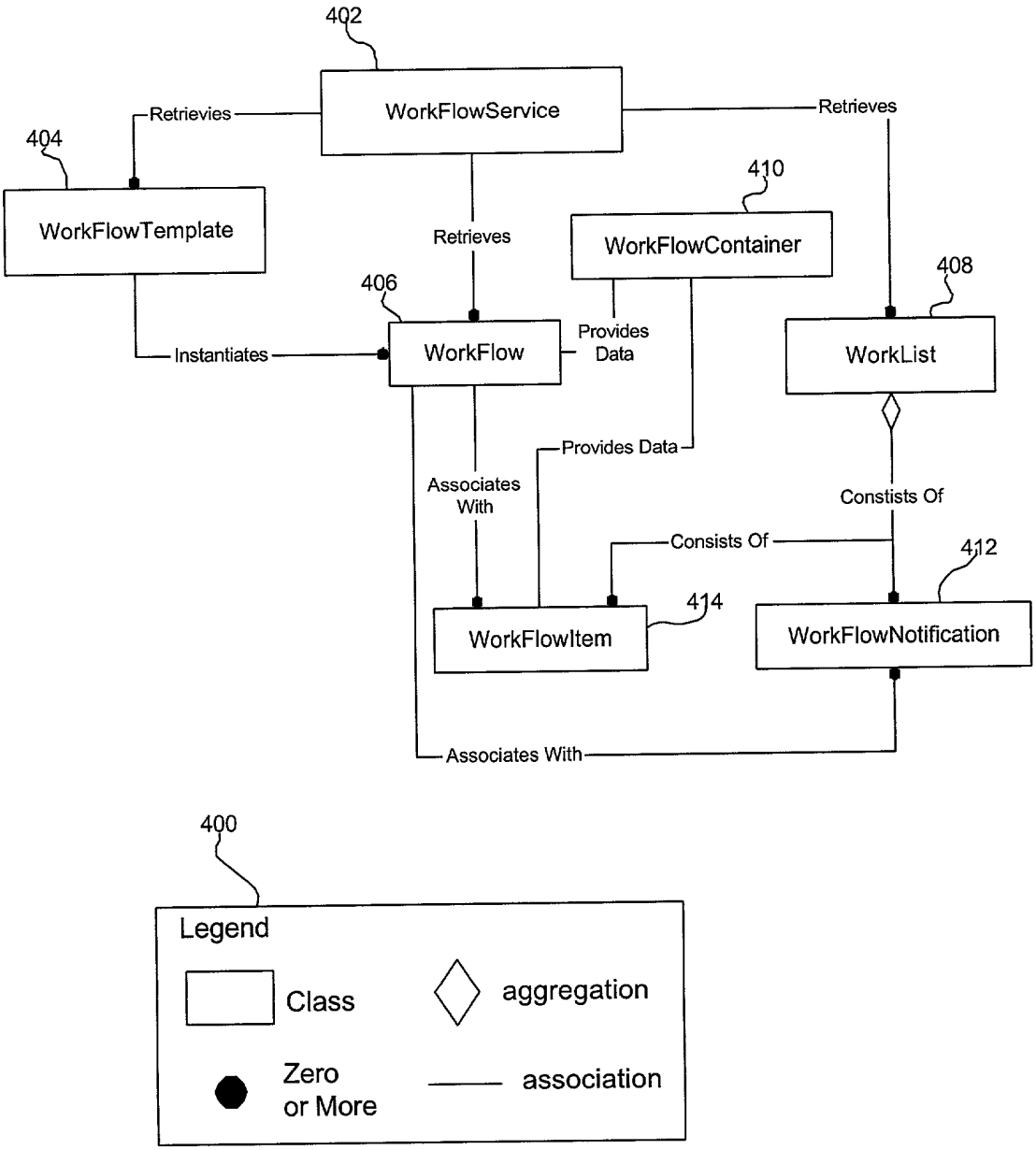

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FIG. 11

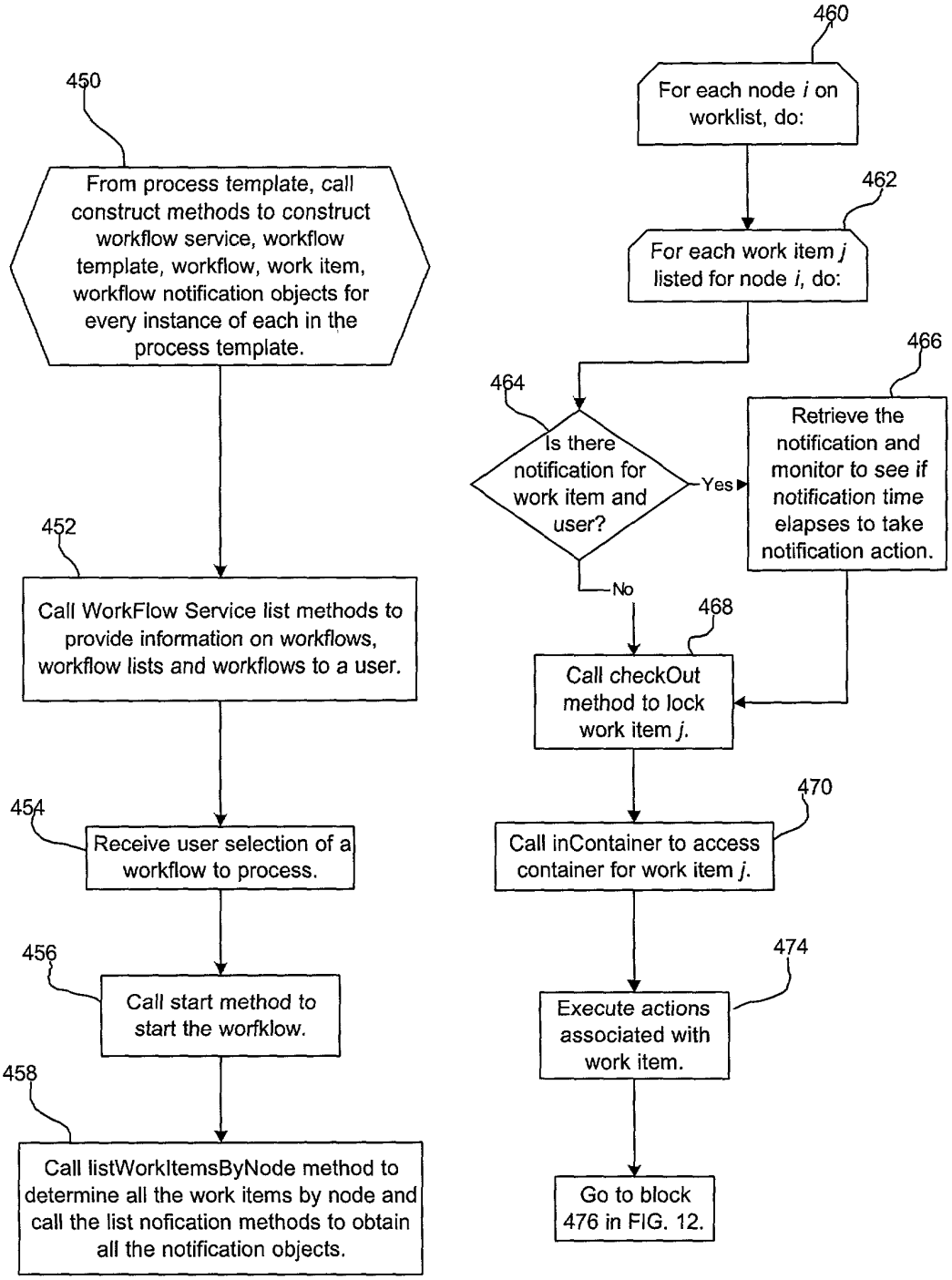
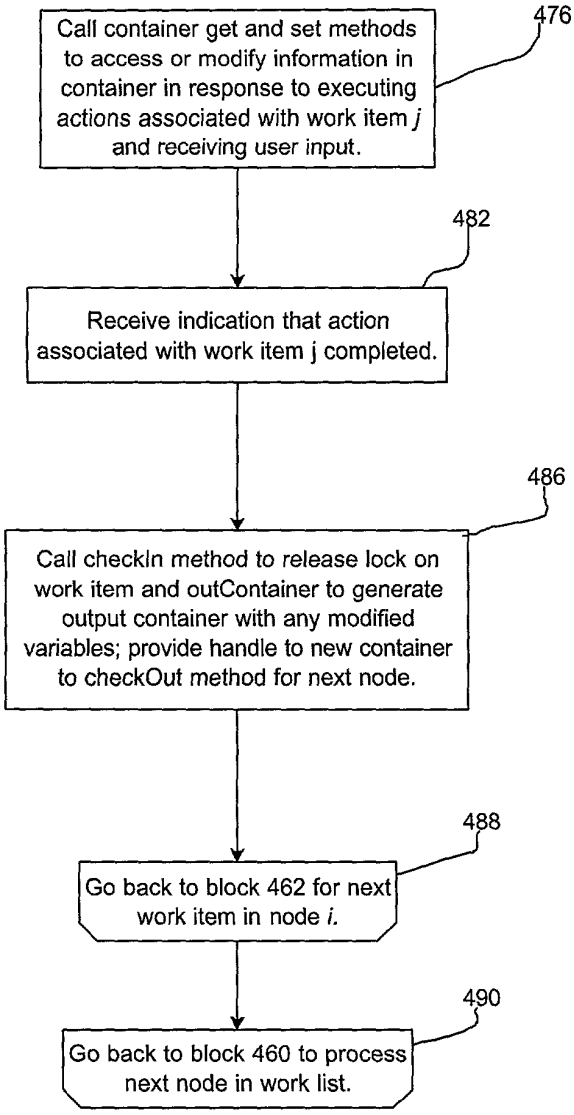

450
From process template, call construct methods to construct workflow service, workflow template, workflow, work item, workflow notification objects for every instance of each in the process template.
452
Call WorkFlow Service list methods to provide information on workflows, workflow lists and workflows to a user.
454
Receive user selection of a workflow to process.
456
Call start method to start the worfklow.
458
Call listWorkItemsByNode method to determine all the work items by node and call the list nofication methods to obtain all the notification objects.
460
For each node i on worklist, do:
462
For each work item j listed for node i, do:
464
Is there notification for work item and user?
Yes
No
466
Retrieve the notification and monitor to see if notification time elapses to take notification action.
468
Call checkOut method to lock work item j.
470
Call inContainer to access container for work item j.
474
Execute actions associated with work item.
Go to block 476 in FIG. 12.

FIG. 12



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